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#### ABSTRACT OF THE DISCLOSURE

N<sup>+</sup>-type diffusion regions, P-type diffusion region and others are formed at and near a surface of an N<sup>-</sup>-type epitaxial layer on a p-type silicon substrate. Gate electrode portions are formed on P-type diffusion region located between N<sup>-</sup>-type diffusion regions and N<sup>-</sup>-type epitaxial layer with a gate insulating film therebetween. A source electrode and a drain electrode are formed. Under a field isolating film, a P-type diffusion region is formed discretely in a direction crossing a direction of a current flow in the on state. Thereby, such a semiconductor device is obtained that rising of an on resistance can be suppressed in an on state while keeping an effect of reducing an electric field.